



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,624	10/27/2005	Ryouichi Koga	P28729	7272

52123 7590 02/28/2011
GREENBLUM & BERNSTEIN, P.L.C.
1950 ROLAND CLARKE PLACE
RESTON, VA 20191

EXAMINER

YOUNKINS, KAREN L

ART UNIT	PAPER NUMBER
----------	--------------

3751

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

02/28/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
pto@gbpatent.com

Office Action Summary	Application No. 10/554,624	Applicant(s) KOGA ET AL.	
	Examiner KAREN YOUNKINS	Art Unit 3751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/7/2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) 21-46 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 October 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/05/2011, 10/12/2010</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, a swirl as required by claim 6 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Proper antecedent basis for the claim language “an internal space” as set forth in the amended claim 3 or “a swirl” as set forth in claim 6 was not found.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Regarding Claim 1, it is unclear whether the applicant intends to claim the washing water. As currently written “the washing water” in lines 3 and 8 lack proper antecedent basis in the claim as washing water has only been functionally recited in line 2. Further instances of the limitation “the washing water” appear throughout the claims. It is noted that if the applicant amends the claim to specifically structurally claim the washing water the applicant may produce a product and process hybrid claim by claiming the method step of introducing the water. Thus, for the purposes of examination the examiner assumes the applicant intends to claim washing water functionally as supported by line 2.

6. Regarding Claim 3, is unclear what the applicant intends to claim as an internal space as it is not clearly defined by the claim and not discussed in the specification.

Clarification is requested.

7. Regarding Claim 4, the language relating to diameters renders the claim indefinite. The definition of diameter is the length of a straight line passing through the center of a circle and connecting two points on the circumference. The distance referred to by the applicant, from opening to orifice, is not a circle. Therefore this distance can not be a diameter. Claim 4 goes on to further define second and third inner diameters upon the definition of the first inner diameter. Thus, it is unclear what the second and third inner diameters are since the first inner 'diameter' is unclear.

Claims 7-8 recite "said first space has an inner diameter" and "said third space has an inner diameter". The use of this language requires two distinct diameters, the ones claimed in claim 4 and the ones claimed in 7 and 8. However, the examiner believes the applicant intends to claim only one distance for each of the first, second, and third spaces. Clarification is requested.

8. Claim 6 recites the limitation "the axis of said second flow path" in page 5. There is insufficient antecedent basis for this limitation in the claim.

9. Further regarding Claim 6, the language "the washing water is discharged toward the outermost periphery to form a swirl having no vorticity within the cylindrical space" renders the claim indefinite. The limitation of "a swirl" is unclear. There is not a swirl shown in the drawings or described in the specification. There is, however, a swirl chamber corresponding to the second space as already set forth by the applicant in a

Art Unit: 3751

previous claim. It is unclear if the applicant intends to claim "a swirl" to be the second space or something entirely different. Clarification is required.

10. Regarding Claim 20, Claim 20 currently requires a second front end. However, there is only one front end described in the specification. For the purposes of examination the examiner assumes the applicant intends to claim the front end of 20 as the same front end in claim 17 (from which claim 20 depends).

11. In light of the above, the claims are examined as best understood.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1-5 and 7-20, as best as currently understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 3,182,860 to Gallo, SR (Gallo).

14. Regarding Claims 1 and 13, Gallo teaches a nozzle device comprising a spray hole 22, a pipe 30 forming a first flow path, a cover member (16/20) has the spray hole and surrounds the pipe. The cover member is cylindrical about 30 and is integrally formed. A front end, shown where reference character 20 points in figure 2, is closed and prevents washing water from exiting through the front end. There is a space (shown at 36) between an outer surface of the pipe and an inner peripheral surface of the cover member. This space forms a second flow path that introduces water to the

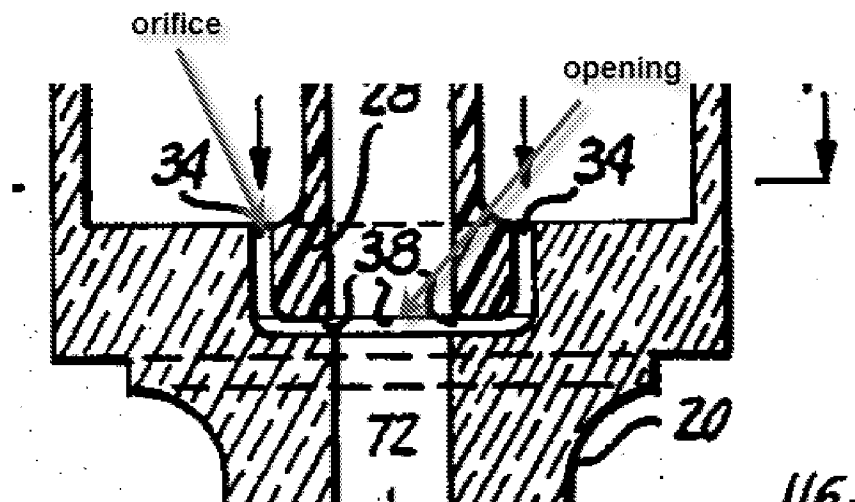
Art Unit: 3751

spray hole, such that the second flow path is configured to surround the outer surface of the pipe in a circumferential direction of the cover member (see figure 2).

Gallo differs in that it does not teach the cover being a stainless metal. Rather, Gallo does not disclose what material the cover is formed of.

Even though Gallo does not specifically disclose that cover comprises a stainless metal material as claimed, it would have been an obvious matter of design choice to one of ordinary skill in the art at the time the invention was made to have modified Gallo by employing the cover stainless metal material. Such modification would be considered a mere choice of a preferred material that is sturdy and resistant to corrosion available on the basis of its suitability for the intended use. In other words, the use of cover made of a metal material would have been an "obvious to try" approach because the use of such a known material for a cover of a nozzle is not of innovation but of ordinary skill and common sense. *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1742, 82, USPQ2d 1382, 1396 (2007).

15. Regarding Claim 2, a spray member (shown generally in the area around 34 and 28) has an orifice that is capable of merging washing water from the first and second flow paths as claimed.



16. Regarding Claim 3, the spray member has an 'internal space' with an opening at one end and an orifice at another end (see examiner annotated drawing above). The first flow path is capable of introducing water to the internal space via the opening, and the second flow path is capable of introducing water to the internal space from a peripheral surface of the spray member (see arrows in figure 2). The 'internal space' is an open area in the device. Therefore, there are infinitely many cross sectional areas of all sizes within the internal space, the internal space has a cross-sectional area that gradually or continuously decreases from opening to orifice. Similarly regarding Claim 10, there are infinitely many cross sectional areas of all sizes within the first flow path and the opening of the internal space.

17. Regarding Claims 4-5 and 7-9, (from opening to orifice) the internal space includes a first space having a first inner 'diameter' from said opening to said orifice, a second space having a second inner 'diameter' smaller than said first inner 'diameter', and a third space having a third inner 'diameter' smaller than said second inner

Art Unit: 3751

'diameter'. It is noted that the term 'diameter' renders the claim indefinite as discussed above and are treated as distances. The 'internal space' is an open area in the device. There are infinitely many distances of all sizes within the spray space. Liquid introduced from the second flow path is supplied to the second space, and all other spaces, as it moves through the device. The second space may have a cylindrical space (figure 2 is a cross sectional view), and the liquid introduced from the second flow path is supplied along an inner peripheral surface of the cylindrical space, and all other spaces, see flow of liquid arrows in figure 2.

18. Regarding Claim 11, the spray hole 22 is formed on a peripheral wall in the vicinity of a front end of the cover member (see figure 2) and is 'inserted' into the front end of the cover member as the 28 and 22 are not formed of the same piece, 28 insertably operates within 22/16.

19. Regarding Claim 12, Gallo differs in that the cover member does not have a substantially hemispherical shape. However, it would have been obvious to one having ordinary skill in the art to have tried modifying the shape of the cover member to be substantially hemispherical in shape as a design choice. A change in form or shape is generally recognized as being within the level of ordinary skill in the art, absent any showing of unexpected results. *In re Dailey et al.*, 149 USPQ 47. A Change in aesthetic (ornamental) design generally will not support patentability. *In re Seid*, 73 USPQ 431. By extending the outer portion of the cover member to be substantially hemispherical, the nozzle is still capable of being used in its intended manner.

20. Regarding Claim 14, the language “wherein the cover member is formed by drawing forming” is a product limitation. The determination of patentability in a product-by-process claim is based on the product itself, even though the claim may be limited and defined by the process. That is, the product in such a claim is unpatentable if it is the same as or obvious from the product of the prior art, even if the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985). A product-by-process limitation adds no patentable distinction to the claim, and is unpatentable if the claimed product is the same as a product of the prior art. (Same cite as above)

21. Regarding Claim 15, the bottom end of the cover member (which is a ‘peripheral wall’) as shown in figure 2 is flat and in the vicinity of the front end. The spray hole is formed on this flat surface, see figure 2.

22. Regarding Claim 16, it is noted that the term ‘diameter’ renders the claim indefinite as discussed above and claimed diameters are treated as distances. The ‘internal space’ is an open area in the device. There are infinitely many distances of all sizes within the internal space, as well as within the orifice.

23. Regarding Claims 17-18, the connection between the protrusion at 28 (or ‘second flat portion’) and the corresponding side wall of 16 (around the opening at 34, or ‘first flat portion’) is a ‘positioner’ to the extent claimed, as the threads are capable of positioning a device. The orifice is ‘positioned relative’ to the spray hole as they are within the same device. The pipe is ‘inserted’ and positioned in such a way that the second flat portion and first flat portion are opposite. an See figure 2. Regarding Claim

Art Unit: 3751

20, the bottom of the protrusion at 28 be a front end abutment portion, as it abuts the structure/flow of material below.

24. Regarding Claim 19, the space between the spray member and the cover member is annular. The examiner takes official notice that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included an annular sealing member between the two to control the flow of water in a desired manner.

Allowable Subject Matter

25. Claims 6, as best as currently understood, would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

26. The following is a statement of reasons for the indication of allowable subject matter: The swirl having no vorticity within the cylindrical space as best understood by the examiner was not found.

Response to Arguments

27. Applicant's arguments filed 12/7/2010 have been fully considered but they are not persuasive.

28. At page 21 the applicant has states that the term 'the washing water' is intended to be functionally recited throughout the claims, however the applicant has not amended the claims to clarify that 'the washing water' is functionally recited.

29. At page 21, the applicant has asserted that “spray space” has been replaced with –internal space--. The examiner has addressed the new claim language in the rejection above.

30. Regarding the confusion between front end(s) of the cover member and the spray member, the applicant has asserted at page 22 that these elements are distinct. However, the claims have not been amended to specifically define them as so nor has the applicant pointed to where in the specification as originally filed there is support for two distinct front ends.

31. It is noted that the arguments filed 12/7/2010 fail to address many of the examiner's rejections under 35 U.S.C. 112, second paragraph, nor have the claims been amended to overcome the rejections.

32. It is further noted that the applicant's amendment (including amendments to claim dependency) has necessitated the new ground(s) of rejection presented in this Office action, specifically with regard to claims 11 and 19.

33. Applicant's arguments with respect to the previous rejection of claims 1-5, 7-10, 14-17, and 20 under 35 U.S.C. 103 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

34. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAREN YOUNKINS whose telephone number is (571)270-7417. The examiner can normally be reached on Monday through Friday 7:30am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on (571)272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3751

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. Y./

Examiner, Art Unit 3751

/Gregory L. Huson/

Supervisory Patent Examiner, Art Unit 3751